

ZFW



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 02-1288-A)

In re Application of:)	
)	
Tavassoli, et al.)	Before the Examiner:
)	TBA
Serial No.: 10/501,755)	
)	Art Unit: 1623
Filed: July 1, 2004)	
)	Confirmation No. 3100
For: Methods for the Preparation of Alkyl Diaryl)	
Borinates and Complexed Diarylboronic Acids)	

TRANSMITTAL LETTER

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In regard to the above identified application:

1. We are transmitting herewith the attached:
 - a. Form PTO 1449
 - b. Copies of eighty-one (81) Cited References
 - c. Return Receipt Postcard
2. No fees are due at this time.
3. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.
4. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 12th day of January, 2007.

Date: Jan. 12, 2007

Respectfully submitted,

Bradley W. Crawford
Bradley W. Crawford
Registration No. 50,494

FORM PTO-1449
(Rev. 2-32)

U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No.

02-1288-A

Serial No.

10/501,755

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)



Applicant:

Tavassoli, et al.

Filing Date:

July 1, 2004

Group:

1623

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	*	3,485,864	12/23/1969	Birnbaum, et al.			
	*	4,199,574	04/22/1980	Schaeffer			
	*	4,713,346	12/15/1987	Gallop, et al.			
	*	5,130,302	07/14/1992	Spielvogel, et al.			
	*	5,348,947	09/20/1994	Patel			
	*	5,348,948	09/20/1994	Patel			
	*	5,362,732	11/08/1994	Spielvogel, et al.			
	*	5,789,416	08/04/1998	Lum, et al.			
	*	6,287,713	12/14/2000	Heuer et al.			
	*	6,420,301	07/16/2002	Kristen et al.			
	*	6,734,457	05/11/2004	Yamazaki et al.			
	*	7,019,055	03/28/2006	Wang			

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	1	WO 00/056812 A1	09/28/2000	PCT				

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449
(Rev. 2-32)

U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No.

02-1288-A

Serial No.

10/501,755

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

Applicant:

Tavassoli, et al.

Filing Date:

July 1, 2004

Group:

1623

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	2	WO 00/075142 A2	12/14/2000	PCT				
	3	WO 02/044184 A3	02/27/2003	PCT				
	4	WO 03/33002 A1	04/24/2003	PCT				
	5	WO03/059916 A2	07/24/2003	PCT				
	6	WO 04/056322 A3	09/16/2004	PCT				
	7	EP 1155698	11/21/2001	EPO				
	8	2001 342192 A2	12/11/2001	Japan				
	9	2002 322007 A2	11/08/2002	Japan				
	10	WO 98/08855	03/05/1998	PCT				
	11	WO 98/12206	03/26/1998	PCT				
	12	EP 0 967 220 A1	12/29/1999	EPO				
	13	DE 198 29 949		Denmark				
	14	FR 2 071 171		France				
	15	2003-501431	1/14/2003	Japan				
	16	EP 1 420 021 A1	5/19/2004	EPO				
	17	WO 00/44387 A1	8/03/2000	EPO				
	18	EP 0 969 531	1/5/2000	EPO				

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449
(Rev. 2-32)

U.S. Department of Commerce
Patent and Trademark Office

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Atty. Docket No.

02-1288-A

Serial No.

10/501,755

Applicant:

Tavassoli, et al.

Filing Date:

July 1, 2004

Group:

1623

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	19	419929 B	1/21/2001	Taiwan				
	20	2000-150163	5/30/2000	Japan				
	21	2000-011462	2/25/2000	S. Korea				
	22	2003-229275	8/15/2003	Japan				
	23	DE 1 982 640 3	12/16/1999	Germany				
	24	WO 99/65923	12/23/1999	PCT				
	25	2002-518404	6/25/2002	Japan				
	26	ES 2185358	04/16/2003	Spain				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

	27	ALBERTI, A. et al., "Reactions of Triphenylborane with Photoexcited Ketones and with Diazodiarylmethanes," <i>Journal of Organometallic Chemistry</i> , 1985, 297:13-19.
	28	ANDERSON, S. et al., "Materials for organic electroluminescence: aluminum vs. boron," <i>Synthetic Metals</i> , 2000, 111-112:459-463.
	29	CAMPBELL, N. et al., "Tautomerism in the Solid State. Part II.," <i>J. Chem. Soc.</i> , March 1961, 1191-1194.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 02-1288-A	Serial No. 10/501,755
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)			
		Applicant: Tavassoli, et al.	
		Filing Date: July 1, 2004	Group: # 1623

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

30	DOROKHOV, V.A. et al., "Boron chelate complexes with some enamiones and diketones containing pyridine moiety and their mutual transformation in solutions," <i>Izvestiya Akademii Nauk, Seriya Khimicheskaya</i> , 1996, 3:710-714.
31	FARFÁN, N. et al., "Through-bond Modulation of N→ B Ring Formation shown by NMR and X-Ray Diffraction Studies of Borate Derivatives of Pyridyl Alcohols," <i>J. Chem. Soc. Perkin Trans 2</i> , 1992, 4:527-532.
32	FLORENCIO, F. et al., "The crystal structure of [bis(α -pyridyl)bis(diphenylboranoxy)]methane," <i>Zeitschrift fuer Kristallographie</i> , 1984, 168:173-178.
33	FRIESE, B. et al., "Constitution of the 1,5-diphenylcarazonato-diphenylboron chelate – a chemical approach," <i>Monatshefte fuer Chemie</i> , 1978, 109(3):711-718.
34	HAWTHORNE, M. et al., "Amine Boranes. I. The Preparation of Pyridine Arylboranes", <i>J. Amer. Chem. Soc.</i> , 1958, 80:4291-4296.
35	HAWTHORNE, M. et al., "Amine Boranes. II. The Preparation of Pyridine Diarylboranes", <i>J. Amer. Chem. Soc.</i> , 1958, 80:4291-4296.
36	HAYNES, R.R. et al., "Aryl Boronic Acids. VIII. Reactions of boronophthalide," <i>Journal of Organic Chemistry</i> , November 1964, 29(11):3229-3233.
37	HOHAUS, E. et al., "Boron chelates and boron metal chelates. I. Boron chelates with chelating agents of they pyridine and quinoline series and their N-oxides," <i>Chemische Berichte</i> , 1969, 102(12):4025-4031.
38	HOHAUS, E. et al., "Mass spectrometric studies of boron chelates of the pyridine and quinoline series and their N-oxides," <i>Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie, Biochemie, Biophysik, Biologie</i> , July/August 1973, 28(7-8):440-445.

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 02-1288-A	Serial No. 10/501,755
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)			
		Applicant: Tavassoli, et al.	
		Filing Date: July 1, 2004	Group: # 1623

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

39	HOHAUS, E. et al., "Mass spectrometric investigation of boron chelates, III. Mass spectrometric fragmentation of fluoroboron and phenylboron chelates," <i>Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie</i> , March 1976, 31B(3):324-329.
40	HÖPFL, H. et al., "X-Ray Crystallographic Study of Three (N→B)-Borinates Prepared From 8-Hydroxyquinoline and 2-Hydroxypyridine," <i>Chemistry of Heterocyclic Compounds</i> , 1999, 35(8):912-927.
41	KLIEGEL, W. et al., "Molecular rearrangement of cyclic boron-nitrogen betaines," <i>Materials Science Monographs</i> , 1985, 28B (React. Solids, Pt. B):725-726.
42	LIN, K. et al., "Synthesis and antitumor activity of organyloxy-diarylborane chelates containing quinoline ring," <i>Yiyao Gongye (Pharmaceutical Industry)</i> , 1985, 16(11):500-502.
43	LIU, X. et al., "Structure studies of bis(substituted)-2-(substituted)-8-hydroxyquinolines," <i>Youji Huaxue (Chinese Journal of Organic Chemistry)</i> , August 1991, 11(4):410-415.
44	MICHALOW, W. et al., <i>Izv. Akad. Nauk SSSR SER.KHIM</i> , 1956, 451-453.
45	MOEHRLE, H. et al., "Conformation influences during the dehydrogenation of phenolic Mannich bases," <i>Monatshefte fuer Chemie</i> , 1974, 105(6):1151-1163.
46	MOEHRLE, H. et al., "Real structures of drugs seemingly derived from 1-(8-hydroxyquinol-5-yl)-3-phenylpropane-1,3-dione," <i>Pharmazie</i> , 1985, 40(5):307-311.
47	MOEHRLE, H. et al., "Reaction of functional epoxycarbonyl compounds opposed to hydrogen chloride," <i>Pharmazie</i> , 1985, 40(6):387-393.
48	MOEHRLE, H. et al., "Concurrent reaction of the phenol and the 1,3-dicarbonyl function under Mannich conditions," <i>Pharmazie</i> , 1985, 40(11):767-771.

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 02-1288-A	Serial No. 10/501,755
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)			
		Applicant: Tavassoli, et al.	
		Filing Date: July 1, 2004	Group: # 1623

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

49	MOROZOVA, T.L. et al., "Thermal decomposition of organoaluminum and organoboron compounds with intramolecular coordination," <i>Term. Anal. Fazovye Ravnovesiya</i> , 1985, 31-33, Publisher: Permsk. Gos. Univ., Perm, USSR.
50	NEU, R., "The identification of boron in organic bondings," <i>Z. Anal. Chem.</i> , 1960, 176(5):343-346.
51	NEU, R., "Coordination compounds from diphenylboric acid and substances with ring nitrogen as the electron donors," <i>Chemical Abstracts</i> , 1961, 10G - Heterocyclic Compounds:14457.
52	PARTS, L. et al., "Oxidation of Methylboranes at 77 - 170° K," <i>Inorg. Chem.</i> , November 1964, 3(11):1483-1486.
53	PEYTON, J. et al., <i>J. Organomet. Chem.</i> , 1978, 156:101-110.
54	ROTH, H. et al., "Specificity of the TTC reaction. VI. Mechanism of the TTC reaction of pyridinium carbinols. Reaction of N-methylpyridinium-2-carbinol hydroxide with triphenylboron," <i>Archiv der Pharmazie und Berichte der Deutschen Pharmazeutischen Gesellschaft</i> , 1967, 300(1):44-52.
55	SHAN, Z. et al., "Syntheses of aromatic nitrogen-containing heterocyclic derivatives of asymmetric diarylborinic acids," <i>Wuhan Daxue Xuebao, Ziran Kexueban (Journal of Wuhan University, Natural Science Edition)</i> , 1990, 3:67-72.
56	TABUCHI, H. et al., "Synthesis and Anticoccidial Activity of Some Azacyclo Organoborinates," <i>Heterocycles</i> , 2002, 57(7):1319-1326.
57	TABUCHI, H. et al., "Anticoccidial Activity of Some Azacyclo Organoborinates," <i>Heterocycles</i> , 2003, 60(1):177-182.
58	THIERIG, D. et al., "Photometric determination of diphenylborinic acid and its esters with diphenylcarbazone," <i>Zeitschrift fuer Analytische Chemie</i> , 1966, 215(1):24-30.

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 02-1288-A	Serial No. 10/501,755
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)			
		Applicant: Tavassoli, et al.	
		Filing Date: July 1, 2004	Group: # 1623

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

59	TITKOV, Y.B., "Luminescence method for determining molybdenum with hydroxyquinoline and sodium tetraphenylborate," <i>Ukrainskii Khimicheskii Zhurnal (Russian Edition)</i> , 1970, 36(6):613-615.
60	TORRES, L. et al., "Rotating-bomb combustion calorimetry and the standard enthalpies of formation of two borinic esters," <i>J. Chem. Thermodynamics</i> , 1994, 26:337-343.
61	TRUJILLO, J. et al., "X-ray crystallographic study of boroxazolidones obtained from L-ornithine, L-methionine, kainic acid and 2,6-pyridinedicarboxylic acid," <i>Journal of Organometallic Chemistry</i> , 1998, 571:21-29.
62	WU, Q. et al., "Synthesis, Structure, and Electroluminescence of BR ₂ q (R = Et, Ph, 2-Naphthyl and q = 8-Hydroxyquinolato), <i>Chem. Mater.</i> , 2000, 12:79-83.
63	YU, D. et al., "Proton and boron-11 NMR spectroscopy of diarylboron chelates containing boron-nitrogen coordinate bonds and of triboranes," <i>Fenxi Ceshi Tongbao</i> , 1990, 9(4):5-10.
64	YUAN, G. et al., "Studies on antitumor boron compounds. V. Fluorine- and methoxy-substituted diphenylboron chelates with N,O-bidentate ligands," <i>Youji Huaxue (Chinese Journal of Organic Chemistry)</i> , June 1989, 9(3):226-229.
65	YUAN, G. et al., "Ligand substitution reaction of diarylboron chelates," <i>Wuji Huaxue Xuebao (Journal of Inorganic Chemistry)</i> , Sept. 1990, 6(3):314-318
66	YUAN, G. et al., "Single site transarylation of 2,2'-dimetalized 1,1'-binaphthyl to aminochloroborates and synthesis of 2-binaphthyl boron compounds," <i>Youji Huaxue (Chinese Journal of Organic Chemistry)</i> , April 1996, 16(2):139-144.
67	ZHANG, G. et al., <i>Youji Huaxue (Chinese Journal of Organic Chemistry)</i> , 1982, 6:409-412.
68	ZIMMERMAN, H.K., "Diphenylborinate Esters of 2-pyridylalkanol Derivatives," <i>Texas J. Sci.</i> , June 1963, 15(2):192-199.

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449
(Rev. 2-32)

U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No.

02-1288-A

Serial No.

10/501,755

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

Applicant:

Tavassoli, et al.

Filing Date:

July 1, 2004

Group:

1623

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

69	RAZIN, A. et al., "DNA Methylation and Gene Function", <i>Science</i> , November 7, 1980, 210:604-610.
70	HEITMAN, J., "On the Origins, Structures and Function of Restriction-Modification Enzymes", <i>Genetic Engineering</i> , 1993, 15:57-108.
71	MAY, M. et al., "Analysis of Bacteriophage Deoxyribonucleic Acid Sequences Methylated by Host- and R-Factor-Controlled Enzymes", <i>Journal of Bacteriology</i> , August 1975, 123(2):768-770.
72	MARINUS, M. et al., "Isolation of Deoxyribonucleic Acid Methylase Mutants of <i>Escherichia coli</i> K-12", <i>Journal of Bacteriology</i> , June 1973, 114(3):1143-1150.
73	PALMER, B. et al., "The <i>dam</i> and <i>dcm</i> Strains of <i>Escherichia coli</i> – a Review", <i>Gene</i> , 143:1-12.
74	KUHNZ, W. et al., "Predicting the Oral Bioavailability of 19-Nortestosterone Progestins <i>In Vivo</i> From Their Metabolic Stability In Human Liver Microsomal Preparations <i>In Vitro</i> ", <i>Drug Metabolism and Disposition</i> , 1998, 26(11):1120-1127.
75	JOST, J. et al., "The Formulation of DNA Methylation Patterns and the Silencing of Genes", <i>Progress in Nucleic Acid Research and Molecular Biology</i> , 1997, 57:217-248.
76	BERDIS, A. et al., "A Cell Cycle-Regulated Adenine DNA Methyltransferase From <i>Caulobacter crescentus</i> Processively Methylates GANTC Sites on Hemimethylated DNA", <i>Proc. Natl. Acad. Sci. USA</i> , March 1998, 95:2874-2879.
77	Thierig, D.; Umland F., "Photometric determination of diphenylborinic acid and its esters with dipehnylcarbazone", <i>Chemical Abstracts</i> , Vol. 64, 1966 , 11863-11864.
78	Beilstein Institut zur Forderung der Chemischen Wissenschaftern, Database accession no. 759640, XP002239683 abstract, <i>J. Amer. Chem. Soc.</i> , Vol. 80, 1958 , page 4291.
79	Beilstein Institut zur Forderung der Chemischen Wissenschaftern, Database accession no 762485, XP002239684 abstract, <i>Izv. Akad. Nauk Sssr Ser. Khim</i> , 1956 , pp. 451-453.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 02-1288-A	Serial No. 10/501,755
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)			
		Applicant: Tavassoli, et al.	
		Filing Date: July 1, 2004	Group: # 1623

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

80	Beilstein Institut zur Forderung der Chemischen Wissenschaftern, Database accession no. 983118, XP002239685 abstract, <i>J. Organomet. Chem.</i> , Vol. 156, 1978 , pp. 101-110.
81	Haynes, et al., "Arylboronic Acids – (VIII) reactions of boronophthalide", Chemical Abstracts, Vol. 61, pp. 16083-16084.

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.